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(54) Abstract Title

Digitally printed labels for writing instruments

(57) Labels for writing instruments (pens, pencils or cases) are produced by digitally colour printing a paper web or sheet, laminating with a film of plastics material (polyester), punching out of the labels and then applying an adhesive to the rear of the individual labels.

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2321434**Applying Colour-Printed Sheets to Writing, Painting or Drawing Instruments****Background to the Invention**

The present discovery relates to a process for applying colour-printed sheets to writing, painting or drawing instruments.

Various printing systems, for example offset, litho, screen printing or flexography, can be used for colour and/or black and white printed sheets for application to the casings of writing instruments. Especially for printing small runs, there are high unit costs in making the photolithos, the zinc or rubber blocks or plates, the screens for screen printing, etc together with starting up the respective printing machines as well as in making the printing proofs. The systems also take a long time before printing can begin.

The Invention

According to the present invention a digital colour printing system is used for printing the sheets.

On the sheets, it is possible to represent for instance effects which are decorative or artistic in an antique or modern manner, photographs of known personages such as football players or singers, colour photographs of tourist or historical localities, annual calendars, and publicity messages with words, photographs, graphics and colours as desired.

The principal advantages which can be obtained are as follows:

- the possibility of printing small runs at reduced costs;
- reduction in the time for making the printed sheets and consequently making the finished product;

- greater market value of the writing instrument covered in this way;
- the reduction of costs of starting up printing machines and of the respective printing proofs;
- greater speed in making and supplying the product to clients and consequently better management of commissions and orders;
- possible reduction in the volume of finished products in storage.

The printed eg paper sheets can be covered in, eg laminated to, a thin, resistant, clear or opaque plastic material having the purpose of protecting the sheets and at the same time of making them more resistant to wear and improving their appearance. The sheets can be of paper or of natural and/or synthetic fibre textiles.

Subsequently, the sheets are punched out in accordance with the required dimensions, corresponding to the exact development of the peripheral surface of the casing of the writing, painting or drawing instrument to be covered, ie the sheets will have dimensions in accordance with the casing of the instrument to be covered. The instrument can be for example a ball-point pen, a paint brush, a fountain pen or a propelling pencil.

Once the sheets have been printed they are passed through suitable automatic applicators which spread a film of adhesive on their rear faces and they are then applied automatically or manually to the casings of the writing, painting or drawing instruments without leaving wrinkles, puckers or other imperfections. The writing instruments are then inserted in appropriate packs and are sent to the wholesaler, and acquire a notable market value.

Example

Using a Canon CLC 700 digital colour printer driven by a Macintosh PC 7600/120, a web or large sheet of paper is colour printed with a number of individual impressions. The web is then laminated to a film of polyester on the printed side of the web. Subsequently, individual sheets are punched out of the web, the individual sheets having the dimensions required for application to cylindrical casings of pens. The individual sheets are stacked and the stack of sheets is passed to a semi-automatic applicator which applies liquid adhesive to the rear of

successive sheets using a rotating cylinder. The sheets are then applied by hand to the casings of the pens.

The invention is not limited to the example described above only by way of example and includes every other variant of the same which has characteristics analogous to those described.

CLAIMS

- 1) A process for applying colour-printed sheets to writing, painting or drawing instruments, comprising colour-printing the sheets using a digital printing system, and applying the sheets to the writing instruments.
- 2) The process of Claim 1, wherein the sheets are coated with a thin plastics material.
- 3) The process of Claim 1, wherein the operative cycle comprises:
 - colour printing the sheets;
 - applying a thin layer of plastics material to the sheets;
 - punching out the sheets according to the dimensions required;
 - spreading a layer of adhesive on the sheets; and
 - applying the sheets to the writing instruments.
- 4) The process of any of the preceding Claims, wherein the sheets are of paper.
- 5) The process of any of Claims 1 to 3, wherein the sheets are of fabric.
- 6) A process for applying colour-printed sheets to writing, painting or drawing instruments, substantially as herein described in the foregoing Example.
- 7) A writing, painting or drawing instrument to which has been applied a colour-printed sheet by the process of any of the preceding Claims.